

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 1999		
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604750F Intelligence Equipment				PROJECT 2053		
COST (\$ In Thousands)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
2053 National Air Intel Center	1,174	1,296	1,345	1,311	1,326	1,350	1,377	1,406	Cont	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0

(U) **A. Mission Description**

Intelligence Equipment (IE) provides continuing development and upgrades of threat analysis capabilities of the National Air Intelligence Center (NAIC) and Air Force Information Warfare Center (AFIWC). Both organizations are tasked with providing detailed foreign technology intelligence information to a variety of DOD and non-DOD customers. In the past few years, customers' requirements have been more sophisticated, dictating more detailed and timely intelligence not only in the technology regime but also in the economic, world crisis, and political arenas. IE provides NAIC and AFIWC with the tools necessary to produce timely intelligence of foreign weapon systems and develops the tools to model and assess foreign airborne and aerospace systems. This is the only AF program developing new, or upgraded analysis, modeling and simulation tools focused on intelligence production in support of AF developmental and operational functions.

(U) **FY 1998 (\$ in Thousands):**

- (U) \$ 172 Completed Model Synthesis Interface
- (U) \$ 96 Initiated Advanced Communication Network Modeling
- (U) \$ 154 Initiated Computer Requirements Model for Payload Study (CRMPS) I/O Modeling
- (U) \$ 350 Continued Radio Frequency Weapons Modeling
- (U) \$ 336 Completed Advanced Infrared Countermeasures Assessment
- (U) \$ 66 Completed Virtual Laboratory/Model Testbed
- (U) \$1,174 Total

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<p>(U) FY 1999 (\$ in Thousands):</p> <ul style="list-style-type: none"> - (U) \$ 265 Complete Advanced Communication Network Modeling - (U) \$ 295 Complete CRMPS I/O Modeling - (U) \$ 265 Complete Radio Frequency Weapons Modeling - (U) \$ 155 Initiate Comm Network Modeling Tool Upgrade - (U) \$ 155 Initiate Adv Infrared Countermeasures Systems Assessment Model (AIRSAM) Update - (U) \$ 53 Initiate Radio Frequency Weapons Modeling Improvements (HEIMDALL-2+) - (U) \$ 75 Initiate High Speed Propulsion/Pulsed Detonation Engine Model - (U) \$ 33 Identified as a source for SBIR - (U) \$1,296 Total <p>(U) <u>FY 2000 (\$ in Thousands):</u></p> <ul style="list-style-type: none"> - (U) \$ 266 Complete Comm Network Modeling Tool Upgrade - (U) \$ 297 Continue Adv Infrared Countermeasures Systems Assessment Model (AIRSAM) Update - (U) \$ 342 Continue RFW Modeling Improvements (HEIMDALL-2+) - (U) \$ 96 Complete High Speed Propulsion/Pulsed Detonation Engine Model - (U) \$ 142 Initiate/Complete H.S. Propulsion/Air-Turbo Ramjet Engine Model - (U) \$ 142 Initiate/Complete H.S. Propulsion/Turbo-Ramjets Engine Model - (U) \$ 60 Initiate Missile System/Booster & Post Booster Upgrades for MiTAS - (U) \$1,345 Total <p>(U) <u>FY 2001 (\$ in Thousands):</u></p> <ul style="list-style-type: none"> - (U) \$ 65 Complete Adv Infrared Countermeasures Systems Assessment Model (AIRSAM) Update - (U) \$ 61 Complete Radio Frequency Weapons Modeling Improvements (HEIMDALL-2+) - (U) \$ 302 Complete Missile System/Booster & Post Booster Upgrades for MiTAS - (U) \$ 257 Initiate Integrated I/O Modeling Environment - (U) \$ 226 Initiate/Complete IVIEW 2000 Upgrade - (U) \$ 256 Initiate Advanced Analysis Capability: Integrated Avionics System Model - (U) \$ 144 Initiate DIODE Objectives Model - (U) \$1,311 Total 		
<div style="display: flex; justify-content: space-between;"> Project 2053 Page 2 of 8 Pages Exhibit R-2 (PE 0604750F) </div>		

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<p>(U) B. <u>Budget Activity Justification:</u> This effort is Budget Activity 5, Engineering & Manufacturing Development, because the program develops and inserts new technology into existing systems and models to keep existing systems current.</p>																																																																	
<p>(U) C. <u>Program Change Summary (\$ in Thousands)</u></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="text-align: center; width: 10%;"><u>FY 1998</u></th> <th style="text-align: center; width: 10%;"><u>FY1999</u></th> <th style="text-align: center; width: 10%;"><u>FY 2000</u></th> <th style="text-align: center; width: 10%;"><u>FY 2001</u></th> <th style="text-align: center; width: 10%;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td>(U) Previous President's Budget (FY1999)</td> <td style="text-align: center;">1,223</td> <td style="text-align: center;">1,300</td> <td style="text-align: center;">1,369</td> <td style="text-align: center;">1,336</td> <td style="text-align: center;">TBD</td> </tr> <tr> <td>(U) Appropriated Value</td> <td style="text-align: center;">1,287</td> <td style="text-align: center;">1,300</td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) Adjustments to Appropriated Value</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> a. Cong Reductions</td> <td style="text-align: center;">-42</td> <td style="text-align: center;">-4</td> <td></td> <td></td> <td></td> </tr> <tr> <td> b. Small Business Innovative Research (SBIR)</td> <td style="text-align: center;">-23</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> c. Omnibus and other Above Threshold Reprogramming</td> <td style="text-align: center;">-8</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> d. Below Threshold Reprogramming (BTR)</td> <td style="text-align: center;">-40</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) Adjustment to Budget Years Since FY1999 PB</td> <td></td> <td></td> <td style="text-align: center;">-24</td> <td style="text-align: center;">-25</td> <td></td> </tr> <tr> <td>(U) Current Budget Submit/FY2000 PB</td> <td style="text-align: center;">1,174</td> <td style="text-align: center;">1,296</td> <td style="text-align: center;">1,345</td> <td style="text-align: center;">1,311</td> <td style="text-align: center;">TBD</td> </tr> </tbody> </table> <p style="margin-top: 10px;">(U) Significant Program Changes: None</p> <p style="margin-top: 10px;">FY99: \$33 identified as a source for SBIR</p> <p style="margin-top: 10px;">(U) <u>Other Program Funding Summary (\$ in Thousands)</u></p> <p style="margin-top: 10px;">(U) Not Applicable.</p> <p style="margin-top: 10px;">(U) <u>Related Activities</u>—None.</p> <p style="margin-top: 10px;">(U) D. <u>Acquisition Strategy:</u> All major contracts within this Program Element were awarded after full and open competition.</p>							<u>FY 1998</u>	<u>FY1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Total Cost</u>	(U) Previous President's Budget (FY1999)	1,223	1,300	1,369	1,336	TBD	(U) Appropriated Value	1,287	1,300				(U) Adjustments to Appropriated Value						a. Cong Reductions	-42	-4				b. Small Business Innovative Research (SBIR)	-23					c. Omnibus and other Above Threshold Reprogramming	-8					d. Below Threshold Reprogramming (BTR)	-40					(U) Adjustment to Budget Years Since FY1999 PB			-24	-25		(U) Current Budget Submit/FY2000 PB	1,174	1,296	1,345	1,311	TBD
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BUDGET ACTIVITY 5 - Engineering and Manufacturing Development								PE NUMBER AND TITLE 0604750F Intelligence Equipment						PROJECT 2053		
(U) E. <u>Schedule Profile</u>																
<u>FY 1998</u>				<u>FY 1999</u>				<u>FY 2000</u>				<u>FY 2001</u>				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(U) Model Synthesis Interface	*			*												
(U) Adv Communication Network Modeling Tool	*							X								
(U) CRMPS I/O Modeling				*				X								
(U) Radio Frequency Weapons Modeling	*							X								
(U) Advanced IRCM Assessment Model	*			*												
(U) Virtual Laboratory Model Testbed				*	*											
(U) Communication Network ModelingTool Upgrade					*						X					
(U) Advanced IRCM Systems Assessment Model (AIRSAM) Update					*								X			
(U) Radio Frequency Weapons Modeling Improvements (HEIMDALL-2+)								X					X			
(U) High Speed Propulsion / Pulsed Detonation Engine Model								X		X						
(U) High Speed Propulsion / Air-Turbo Ramjet Engine Model									X	X						
(U) High Speed Propulsion / Turbo-Ramjets Engine Model									X	X						
(U) Missile System / Booster & Post Booster Upgrades for MiTAS												X				X
(U) Integrated I/O Modeling Environment													X			
(U) IVIEW 2000 Upgrade													X		X	
(U) Advanced Analysis Capability: Integrated Avionics System Model													X			
(U) DIODE Objectives Model															X	
* denotes completed event																
X denotes planned event																
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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)				DATE
				February 1999
BUDGET ACTIVITY		PE NUMBER AND TITLE		PROJECT
5 - Engineering and Manufacturing Development		0604750F Intelligence Equipment		2053
(U) A. <u>Project Cost Breakdown (\$ in Thousands)</u>				
	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
(U) Model Synthesis Interface	172			
(U) Adv Com Network Modeling Tool (CNMT)	96	264		
(U) CRMPS I/O Modeling	154	295		
(U) Radio Frequency Weapons Modeling	350	266		
(U) Adv IRCM Assessment Model	336			
(U) Virtual Laboratory Model Testbed	66			
(U) Com Network Modeling Tool (CNMT) Upgrade		155	266	
(U) Adv IRCM Systems Assessment Model(AIRSAM) Update		155	297	65
(U) Radio Frequency Weapon Modeling Improvements (HEIMDALL-2+)		54	342	61
(U) High Speed Propulsion: Pulsed Detonation Engine Model		74	96	
(U) High Speed Propulsion:Air-Turbo Ramjet Engine Model			142	
(U) High Speed Propulsion: Turbo-Ramjet Engine Model			142	
(U) Missile System: Booster & Post Booster Upgrades for MiTAS			60	302
(U) Integrated I/O Modeling Environment				257
(U) IVIEW 2000 Upgrade				226
(U) Advanced Analysis Capability: Integrated Avionics System Model				256
(U) DIODE Objectives Model				144
(U) Identified as a source for SBIR		33		
(U) Total	1,174	1,296	1,345	1,311

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)										DATE February 1999	
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development					PE NUMBER AND TITLE 0604750F Intelligence Equipment					PROJECT 2053	
(U) B. <u>Budget Acquisition History and Planning Information (\$ in Thousands)</u>											
Performing Organizations:											
Contractor or Government Performing <u>Activity</u>	Contract Method/Type or Funding <u>Vehicle</u>	Award or Obligation <u>Date</u>	Performin g Activity <u>EAC</u>	Project Office <u>EAC</u>	Total Prior to FY <u>1998</u>	Budget FY <u>1998</u>	Budget FY <u>1999</u>	Budget FY 2000	Budget FY 2001	Budget to <u>Complete</u>	Total <u>Program</u>
Identified as a source for SBIR								33			
<u>Product Development Organizations</u>											
GRCI											
93-C-0261/0	CPFF	30 Sep 93	N/A	N/A	683	115				Cont	TBD
GRCI											
93-C-0261/25	CPFF	30 Sep 93	N/A	N/A	153					Cont	TBD
Planning Research Corp/Litton											
95-C-0048	CPFF	31 Jul 98	N/A	N/A		125	215			Cont	TBD
TBD											
99-C-00xx	CPFF	Oct 98	N/A	N/A			125	156		Cont	TBD
Harris Corp											
94-D-0055/10	CPFF	15 May 97	N/A	N/A	225	270				Cont	TBD
Applied Sciences Laboratory											
97-C-0036	CPFF	16 Jul 97	N/A	N/A	100	288	217			Cont	TBD
Applied Sciences Laboratory											
99-C-00xx	TBD	Dec 98	N/A	N/A			45	213	33	Cont	TBD
Planning Research Corp/Litton											
95-C-0048	CPFF	31 Jul 98	N/A	N/A		68	245			Cont	TBD
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BUDGET ACTIVITY 5 - Engineering and Manufacturing Development					PE NUMBER AND TITLE 0604750F Intelligence Equipment					PROJECT 2053	
Contractor or Government Performing <u>Activity</u>	Contract Method/Type or Funding <u>Vehicle</u>	Award or Obligation <u>Date</u>	Performin g Activity <u>EAC</u>	Project Office <u>EAC</u>	Total Prior to <u>FY</u> <u>1998</u>	Budget <u>FY</u> <u>1998</u>	Budget <u>FY</u> <u>1999</u>	Budget <u>FY 2000</u>	Budget <u>FY 2001</u>	Budget to <u>Complete</u>	Total <u>Program</u>
Pattern Analysis Recognition (PAR) Corp											
98-C-0261 Sterling Software, Inc.	FFP	5 Aug 98	N/A	N/A		48				Cont	TBD
98-D-0318/003 TBD (for the 3 High Speed Propulsion projects	CPFF	Oct 98	N/A	N/A			125	177	37	Cont	TBD
TBD (for MiTAS)	TBD	TBD	N/A	N/A			23	193		Cont	TBD
TBD (for Integ I/O Modeling Environ)	TBD	TBD	N/A	N/A				37	181	Cont	TBD
TBD(for IVIEW 2000 upgrade)	TBD	TBD	N/A	N/A				141	360	Cont	TBD
TBD (for Adv Analysis Capability: Integ Avionics System Model	TBD	TBD	N/A	N/A					132	Cont	TBD
TBD (for DIODE Model)	TBD	TBD	N/A	N/A				141	147	Cont	TBD
AFRL (Rome Site)			N/A	N/A		260	268	93	221	Cont	TBD
								194	200	Cont	TBD
<u>Support and Management Organizations</u> - N/A											
<u>Test and Evaluation Organizations</u> - N/A											
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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE February 1999		
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604750F Intelligence Equipment					PROJECT 2053	
Government Furnished Property:										
Item	Contract Method/Type or Funding	Award or Obligation	Delivery	Total	Budget	Budget	Budget	Budget	Budget to	Total
<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>	<u>Prior to</u> <u>FY 1998</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Property</u> - N/A										
<u>Support and Management Property</u> - N/A										
<u>Test and Evaluation Property</u> - N/A										
Identified as a source for SBIR						33				
Subtotal Product Development				1,161	1,174	1,263	1,345	1,311	Cont	TBD
Subtotal Support and Management				0	0	0	0	0		
Subtotal Test and Evaluation				0	0	0	0	0		
Total Project				1,161	1,174	1,296	1,345	1,311	Cont	TBD
Project 2053										
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